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Xi He
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LONE

**An interactive mobile application
introducing an authentic shopping experience.**

Discover Joys of the World, Experience Authentic Shopping.

Xi He

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Fine Arts in Visual Communication Design

Rochester Institute of Technology
School of Design
College of Imaging Arts and Sciences
Visual Communication Design
Rochester, NY
Dec 6, 2018

Committee Member

Chief Advisor

Mike Strobert

Associate Advisor

Dan DeLuna

Associate Advisor

Joel Rosen

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1 Abstract

LONE is an interactive mobile application, which introduces an authentic international shopping experience, helps customers to buy authentic products from a small store in another country. Based on the survey of usage of cross-border e-commerce in selected countries done by United Nations Conference on Trade and Development and Statista, today's customers have higher demands on traveling and purchasing authentic products from overseas ever than before. Since the majority of them don't have the time or budget of going around the world, people buying authentic items from other places become one of the sources for people to get to understand about the culture of different areas. However, it is so difficult for people to get to buy all the authentic things over the world. Due to limited knowledge of the specific location in another country, customers cannot know what's authentic of that location. The lack of authenticity of their available products disappointed customers, and can't satisfy their shopping demand.

LONE connected customers who want to explore authentic items from overseas, with travelers who are willing to share their findings. Then with LONE shoppers, who are local people work for LONE, help customers to purchase and ship the authentic products to them. The foreseen future of global shopping system, customers can buy something selling on a street in another country. Consequently, creating a community of sharing authentic products and experiences globally, thereby, to reach the final goal of broadening people's vision and enhancing cultural understanding.

Keywords

Social Shopping, E-commerce, App, Interactive Design, Travel, Immersive Shopping, user interface design, mobile application, user experience design

2 Introduction

2-1 Situation

Mobile technology is creating tremendous opportunities for both shopping and traveling (J. Theor. appl. electron. commer. res. vol.13 no.1 Talca ene. 2018). The demand for global shopping and traveling have been drastically increasing because of the following reasons: globalization, people's curiosity of new and interesting products, and the necessity of cultural understanding. However, today's global shopping is frustrating for users and can't meet users' needs because of limited accessibility of authentic products, expensive shipping fee, not user-friendly process, etc. More specifically, we do have more access to big brands than ever before, but it's still hard for people to get authentic products or products that are only selling in specific location.

2-2 Problem Statement

It is difficult for people to buy authentic things all over the world. Moreover, it is hard for ordinary people to learn about the outside world due to the limited horizon, unsatisfied curiosity, time and budget limitation, and lack of authenticity of their available products.

From the problem above and the research according to that problem, there are two groups of audiences can be benefited from this project. The first group of audiences is customers, who are willing to buy authentic products from overseas and willing to know more about the outside world, while they don't have time or budget to travel to outside of their countries or even their cities. The second group is travelers, who are more flexible in time that allows them to travel around the world, see a lot of new things, learn new stuff, and stated by researches, a majority of them are more willing to share their experience and cools things they found to other people.

3 Context

Align to our goal of helping people to buy authentic items that can only be found at physical stores in other countries, the implementation of the mobile application aimed to achieve the following goals: broaden the accessibility of products for users, increase the user experience of shopping, ensure the authenticity of products.

To achieve these goals, three approaches were implemented in the project based on rich researches on related topics including business system, traveling, user psychology, social shopping, etc.

3-1 Mobile technology set foundation of shopping overseas

In this project, LONE utilize mobile device as the primary platform because the technology provides convenient access. For the two crucial parts of an audience using LONE are travelers and consumers, a mobile application is the most efficient platform for connecting modern mobile consumers and travelers. More specifically, considering the convenience of travelers taking the photo and sharing authentic products they found, mobile is the most user-friendly tool.

On the other hand, mobile shopping has become increasingly important in marketing and retailing (Rebecca Jen-HuiWang, Edward C.Malthouse, LakshmanKrishnamurthi, 2015), Consumers are more comfortable with mobile commerce today. Based on the research, Forrester's 2018 Retail Best Practices: Mobile Web study found mobile devices will be used in over one-third—or more than \$1 trillion—of total U.S. retail sales at some point in the process of buying something in 2018, including research, price comparisons, and purchases. (Lisa Lacy, ADWEEK, 2018).

Furthermore, according to data from Google Analytics, more than 40 percent of online transactions are made on the mobile device from June 2017 to September 2017.

3-2 Seamless social shopping – better shopping experience

After setting the platform, the next step is to provide users an authentic shopping experience with three methods. Firstly, integrate travelers and consumers. which connects customers who want to explore authentic items from overseas, with travelers who want to share their findings. LONE shoppers, who are local, would help customers to purchase and ship the authentic products to them. More specifically, regarding the User Experience, there are two parts of potential customers in this macroeconomic system. One is travelers, they discovered the products they like in the local area, and share them into the Application. The second part of customers are the ones who shop through the Application. In this way, the Application is creating a community which encourages user-to-user e-commerce community, which becomes a seamless social shopping experience for users. Regarding the design and content of the application, sharing component and generating visual wonders should be the focus.

The foreseen future of global shopping system, customers can buy something selling on a street in another country. Consequently, creating a community of sharing authentic products and experiences globally, thereby, to reach the final goal of broadening people's vision and enhancing cultural understanding.

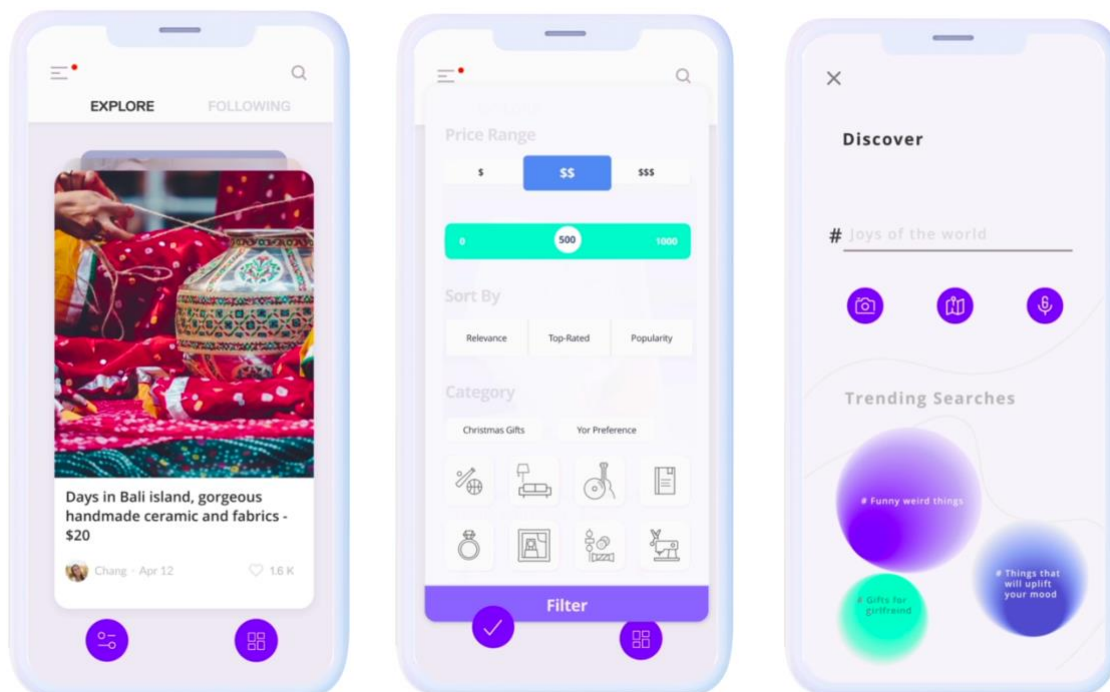
Instead of a purely mobile commerce platform, I want LONE to be a place for inspiration and visual wonder of product exhibition and traveling envision. Through LONE, users can seamlessly shop the products on mobile, going from inspiration given by other travelers to information of products to purchase in just a few steps.

3-3 Making Discovery Simple

Discovery is one of the essential components of LONE, since target customers may have limited knowledge about the products that are selling overseas, making discovery simple can help to create a smooth user journey for customers to access to the specific type of product easily. Provide more discovery options is the method to reach the goal of broadening the accessibility of products for users. Different search options were offered to ensure findability, LONE's discovery system includes main screen discovering, Filter phase and Search Phase.

Filter interaction benefits the application by creating a customized searching for specific categories, price range, sorting method,

Besides search by keywords, Search Phase allows users to search by trending hashtags. Moreover, utilizing mobile technology at its maximum value by using a camera, voice command, and geographic location to explore.

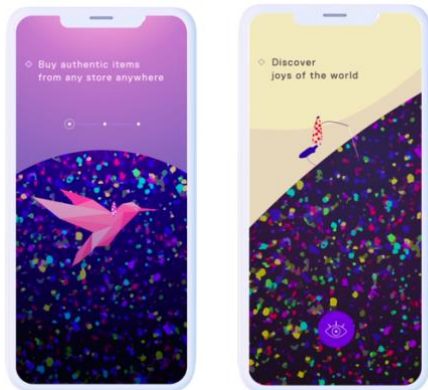


3-3 Authenticity

The authenticity of the product means that the product recommended by travelers who travel to that specific location and local people who live in that specific location. There are various characteristics of this kind of authentic product, such as good quality, good aesthetic, creative, interesting, unique, can illustrate the culture of the area, can be a high-tech product designed by the local designer, etc. All these positive characteristics of authentic products bring a positive image of that place. This is different from some big brands that you can find in Amazon, or recommended by media in your country.

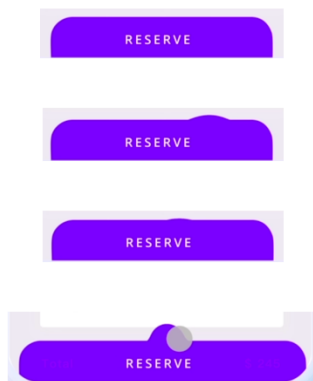
Since it's a key principle of the LONE mobile application, Authenticity needs to be ensured throughout the

application from visual design to interactive design to the whole user experience. Considered the characteristics listed above, the design was created to embrace the uniqueness, as the screens shown below, the landing pages is a storytelling illustration.

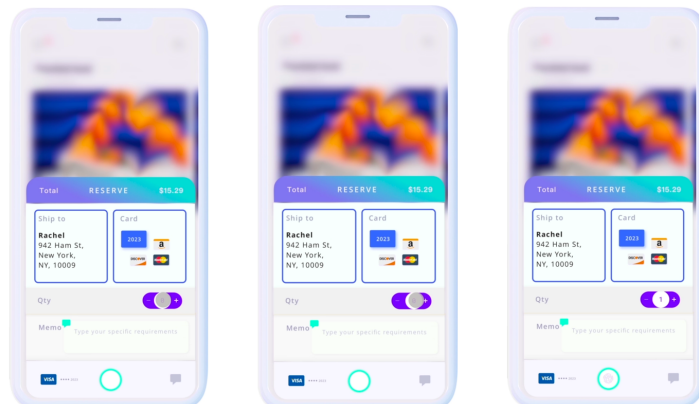


The landing page tells the story of traveler is discovering the world, and a customer is “fishing” the unknown world on the land which means they don’t know what’s out there, but they are curious about the wonders of the outside world.

The interaction between different pages is using water, wave and distorting effect in Adobe After Effects to express a smoother transition and brings the dreamy, things in unknown water kind of feeling.

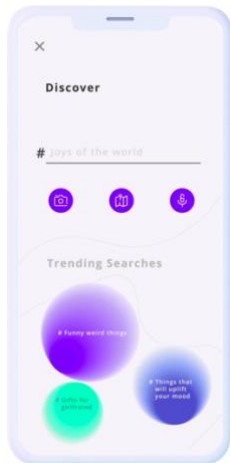


it rewards users interaction with a clear visual response. More specifically, if you stays in the product detail page for more than 8 seconds, it will gives you a subtle call to action motion of the reservation button because the system think you are interested into this product.

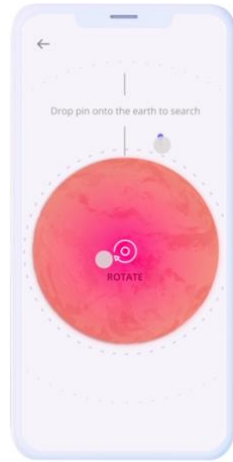


Add quantity button - Swipe right to add product, swipe left to delete product.

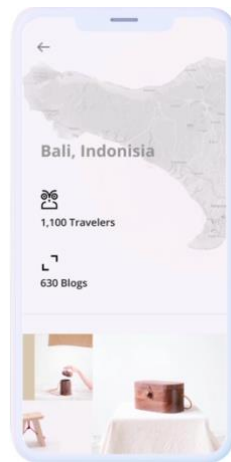
Thoughtful interaction methods were employed into the design to bring users authentic experience and expressed the unique and creative aspects of authenticity.



search page



Pin on Earth page



Search by location detail page

Screens of discovery system are highly connected to “travel” aspect in design. The distorted contour lines in the background of the Search page, the pin on Earth page is to solve the problem that some users don’t know what to buy. The map of that particular place is also shown on Search by location detail page. All the details are supporting the goal.

The overall design is elegant while not losing the playfulness, to express the good aesthetic, creative and interesting characteristics of authenticity.

4 Design Process

The primary goal of this project is to offer users an authentic international social shopping experience through interactive mobile application design. Technologies such as geolocation (detect location to search from that location) were implemented into the interactive model. The design process went through the process of Research and Conception, User Research, Brainstorming and Ideation, Information Architecture, Use Case, Final Design Solution, Feedback and Improvement.

4-1 Research and Conception

There is an excellent potential of connecting global shopping and traveling to provide users with the better shopping experience.

It is hard for people to get to get to buy all the authentic things over the world, more deeply, it is hard for ordinary people to get to know about what is outside world. Firstly, we all have limited knowledge about the outside world. According to the research, normal people get knowledge of other countries from the news, social media, and knowledge related to their specific career field. However, people tend to remember and be attracted by information that is not so good, also, information from news and social media may not be very subjective, and can easily twist people’s views, which leads stereotyping and preconception(prejudice) for other countries, while people are more tend to respect other countries by knowing what’s good about them instead of knowing them based on their GDP (Gross Domestic Product), their foreign policy or some vague impressions from years ago.

Nowadays, people are tending to be willing to know about the outside world more objectively, by traveling to another country, diving into the culture, however, there is a limit number of places that one can travel to in one’s whole life, also, the majority of people don’t have the time or budget to go abroad. A survey shows more Americans don’t travel abroad, “Of the 308 million- plus citizens in the United States, 30%

have passports. That's just too low for such an affluent country. " said Bruce Bommarito, executive vice president, and chief operating officer for the U.S. Travel Association.

According to the survey conducted by Skift.com, only 13 percent of Americans traveled abroad in 2013. Then, purchasing authentic items to that country can develop a direct relationship with customers, and allows them to know what's good about that country, either about their traditional cultural art crafts, or a high-tech product that you hardly see in your life — secondly, the lack of authenticity of products that are available for us. You are not quite sure what is unique, what is authentic, what's the best buy to other countries in the world, but don't you curious about what's the high-tech products, the great designed products in other countries? You might be looking for some hand-crafted artifacts from Indonesia which tells their profound culture and history; you might be looking for high-tech products from Japan that can uplift your life. Finally, the increased demand and ability to purchase authentic items today exceed the supply of internationally authentic goods.

So how can normal people get open their horizon to see what's out there? Communicating with foreign friends, traveling, and the global economy is direct approaches to eliminating the gap and enhancing understanding. Allowing travelers to tell the stories and findings when they are traveling to another country, then customers can learn about the interesting findings shared by travelers, this benefits communication and traveling parts. Customers can purchase the authentic items from overseas benefits global economy part. Through this, LONE can help customers understand the outside world better.

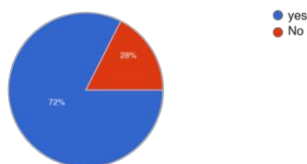
We utilize seamless social e-commerce that connects travelers and buyers, according to the research, buyers will be inspired by normal people on social media who are posting more realistic photos, rather than brand ambassadors or celebrities, Social media informs purchasing choices, also, buyers can easily contact with LONE shoppers, 3rd, to make sure that authenticity comes, the posts each buyer see on the main page will be picked by LONE.

4-2 User Research

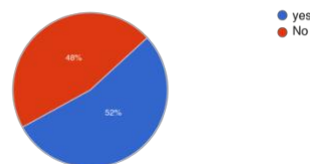
The mobile app LONE targeted on all genders and mostly focus on 18 to 45 who care about the quality and aesthetic of life, curious and are willing to pay for aesthetic goods.

Based on the audience and our basic concept, a user survey was conducted to learn better about the user's pain points and their experience about international shopping.

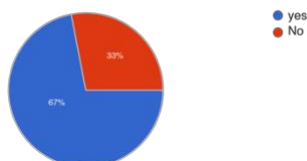
Have you traveled to another country? (56 responses)



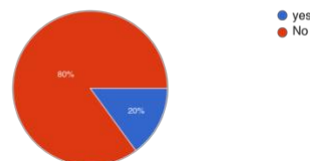
Have you tried international shopping? (80 responses)



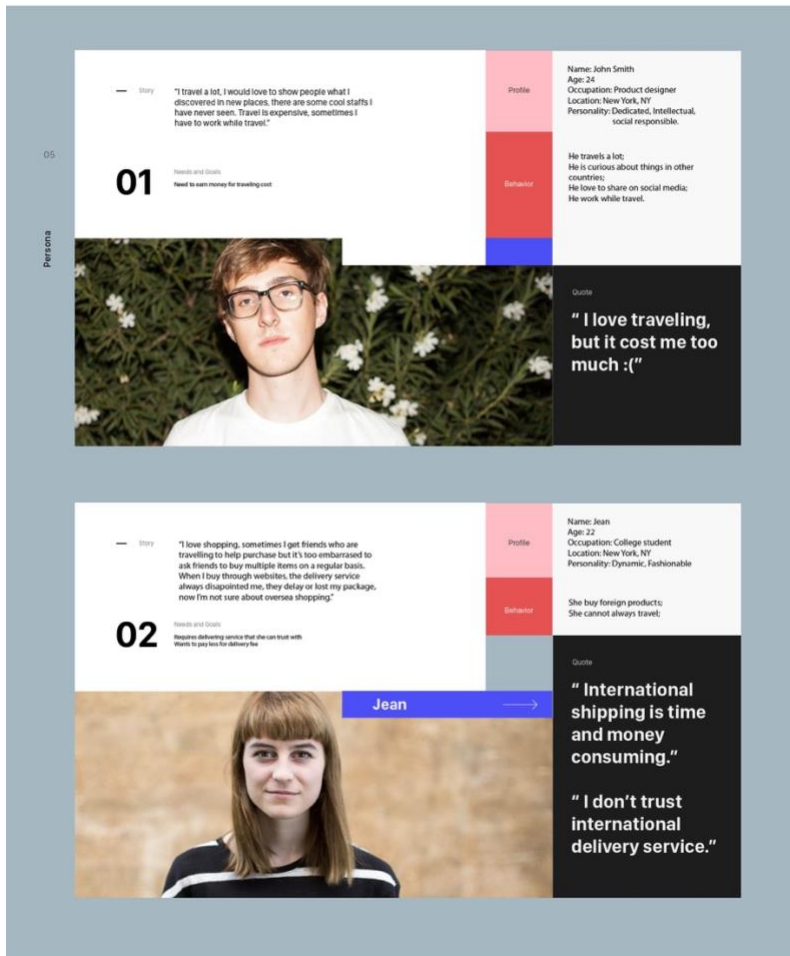
Do you do mobile shopping a lot? (80 responses)



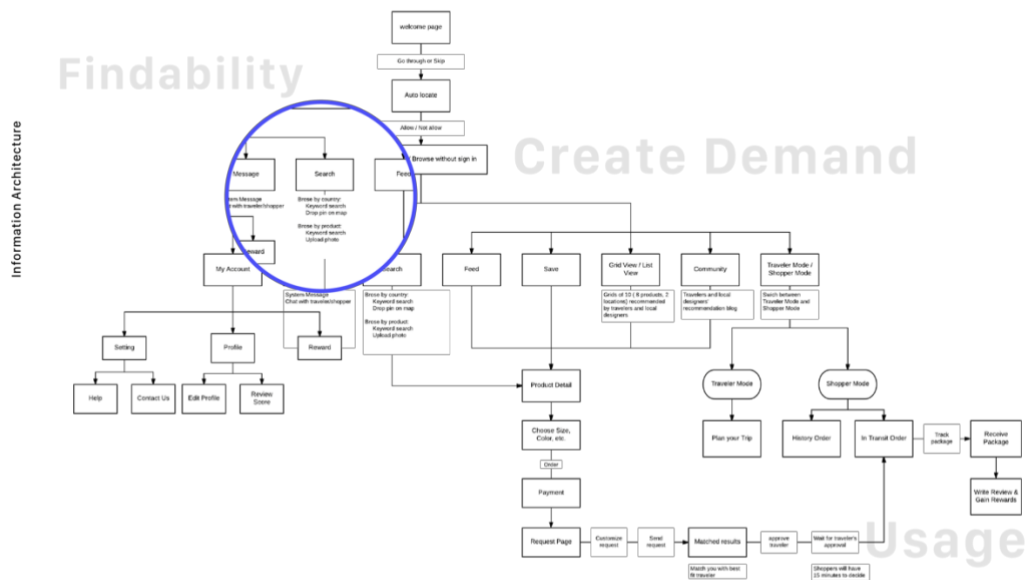
Are you satisfied with the international shopping experience? (50 responses)



According to the research result, two user personas were created, which are fictional and are descriptions of target user of the LONE application. The personas were created for better understanding of the users, including their motivations and requirements. Below are two personas.

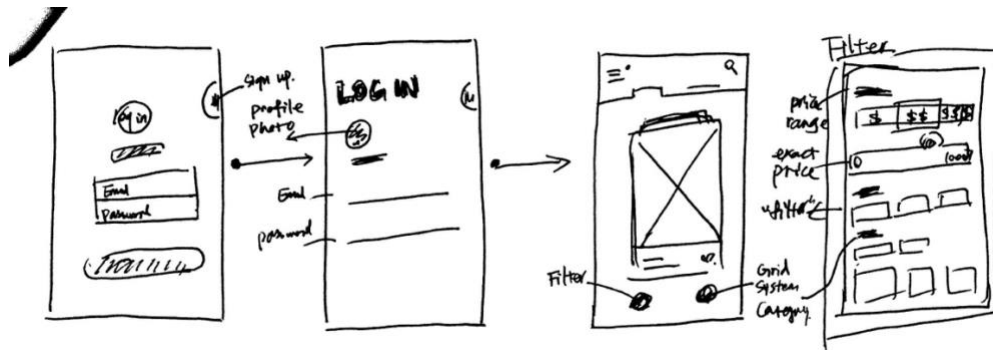


The user research and persona showed that user's pain points are following: first, hard to trust international delivery; second, budget consuming.

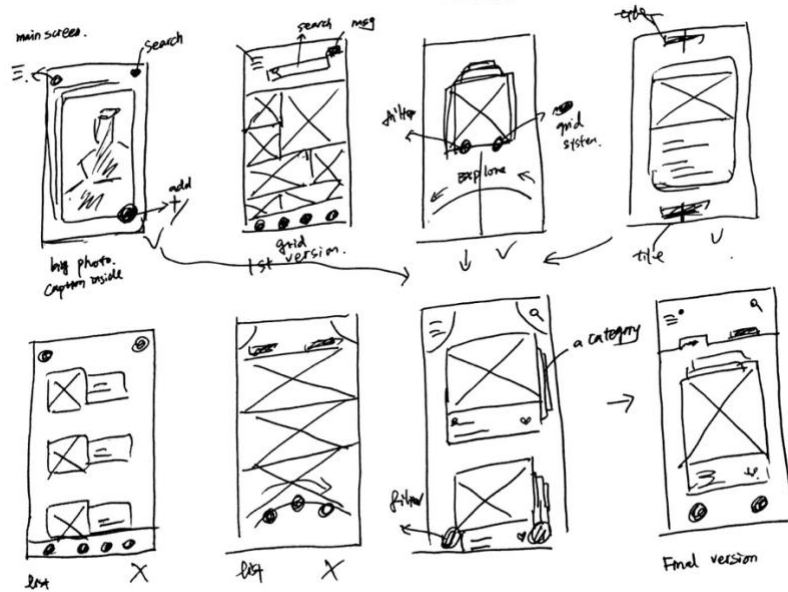


Iterations

Sketches of user experience and user interface. At the early stage, the sketches focused on the logic of the user journey and the key art of few important screens. Then expand to every screen and detailed solutions of each screen.



There were more than eight versions of main page iteration as you can see from the sketch below. The first iteration was grid solution for main page for the reason of showcasing products in an aesthetic way, and give focus only to product photos. The problem of grid design solution for this project is it create comparison, which is opposite with the goal of making discovery process simple. We want users to find the product they like as soon as possible and enter product detail page instead of staying in browsing page for too long. Also, we encourage travelers to share their review or experience of the product, thus, the post or the short caption is also a crucial part of the main content. The List View solution ran into similar problem which is comparison. The final version is not only the best solution in terms of logic thinking of the user's psychology, but also in terms of design, it allows us to hide all other secondary features, can show the product photo and post to users efficiently.



Results

For typography, I used Baskerville at first which was used in a lot of high fashion brand, or luxury e-commerce application, it looked elegant but failed to explain the diversity of authenticity. Then I divided to use Open Sans, which is a clean and modern san-serif typeface.

Open Source
Bold

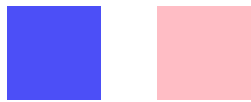
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Open Source
Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

The original main colors, blue (Hex #4C4FF7) and pink (Hex #FFBDC5), were chosen for the reason of playfulness to express the interesting, curiosity of LONE mobile application. However, the 1st round user research of color study showed that this color palette is more attracted by female audience group and kids. To reach the right audience group, the color palette was changed to purple (Hex # 8372FC), green

(Hex #44DEC6) and blue (Hex #538AF2) to bring the authentic while interesting aspects of the experience.



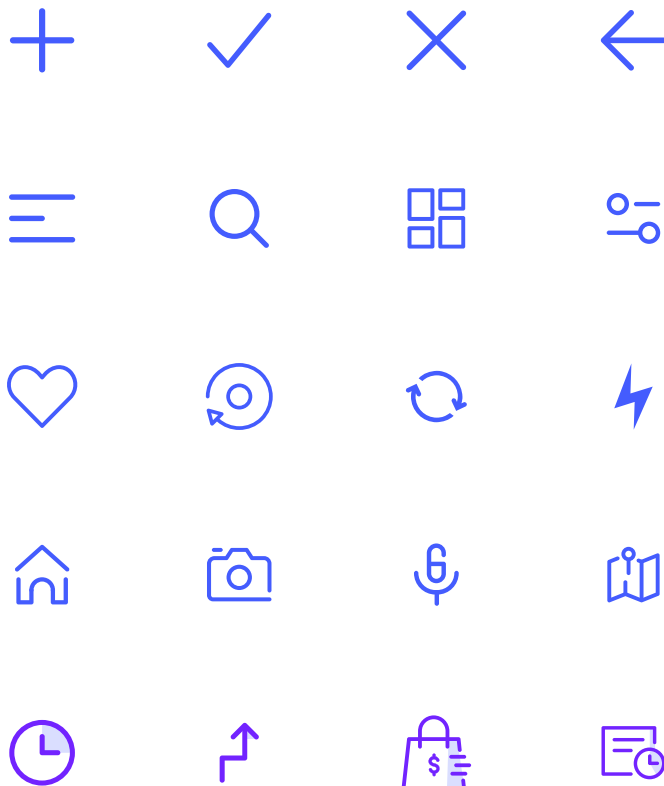
original color palette

S



Final color palette

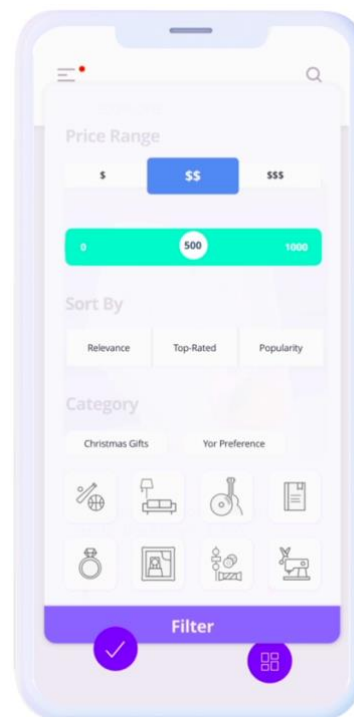
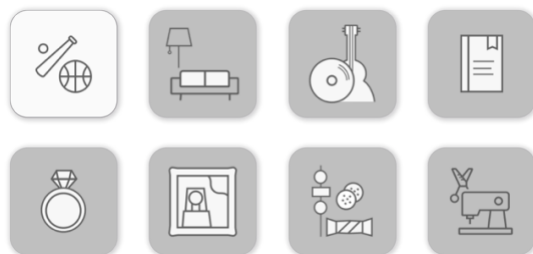
The rule of this system icon suite is that it should be a truly universal language since this mobile application will be used in different countries. The design of icon suite is bold, simple, remain elegant over time and interesting. More specific, the icons are using consistent stroke width, simple shapes, flat shapes instead of 3D perspective forms. The main icons in blue are drawn on their simplest form to ensure the easy understanding and readability. The secondary group of icons in purple are more playful and unique to LONE. The balance of simple and interesting was the challenge when designing these icons.



Regarding functional aspect, the pixel perfection was ensured. Also, the flexible icon set was created to support different potential screen sizes for future use.



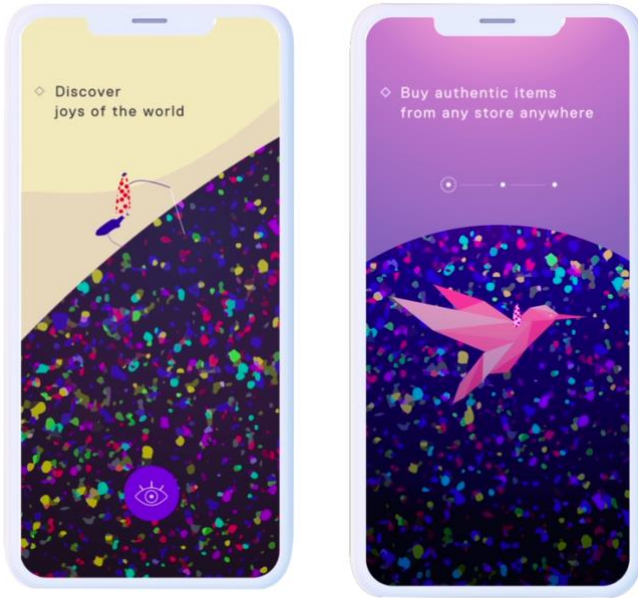
Product icons are for filter page use only, to show different categories of products. These product icons are more complicated compared to the system icons because one category can contain different related subjects.



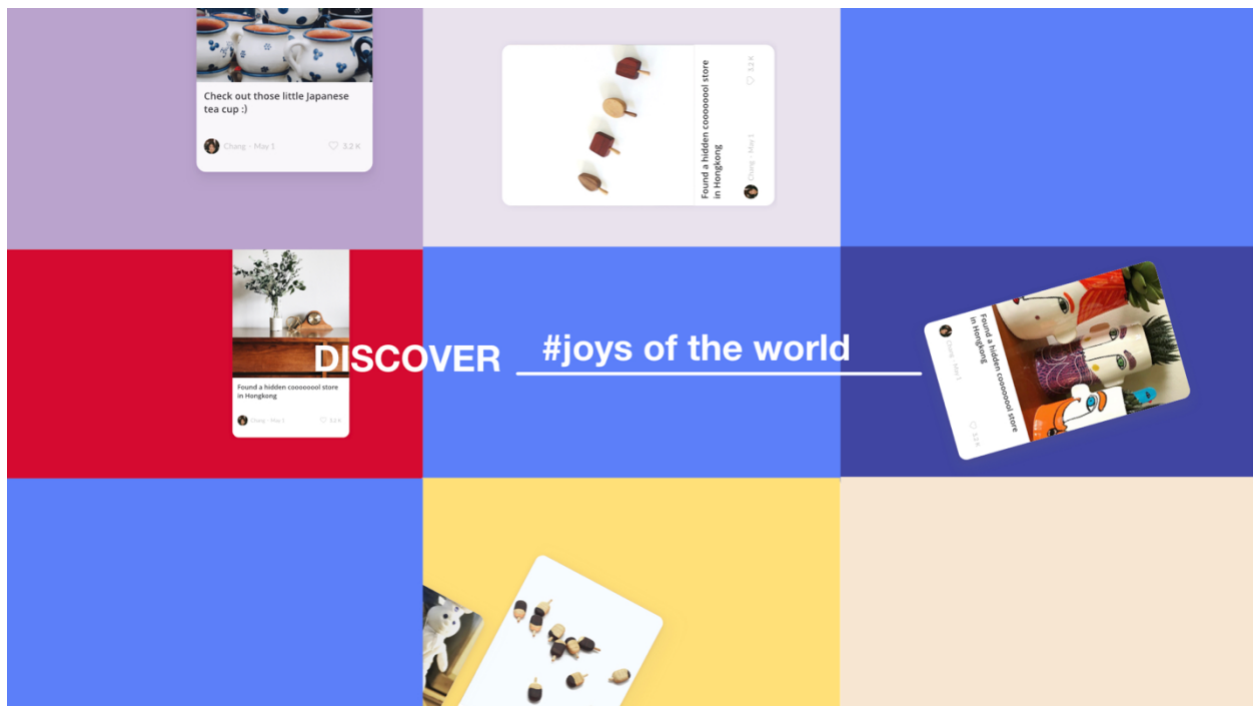
Detailed Features

Landing Page - Inspired by Airbnb's commercial directed by Oddfellows, the illustration style can bring humanity, tell the brand story in a warm way. Because unlike pure graphic design, illustration is illustrating a story in a direct way, with colors, figures in the illustration and behavior of figures.

The landing page of our mobile application is telling the story of LONE, to establish a community concept and authentic brand image when a user open the application for the first time, bring story in front of functional features can build emotional connection between users and the application .

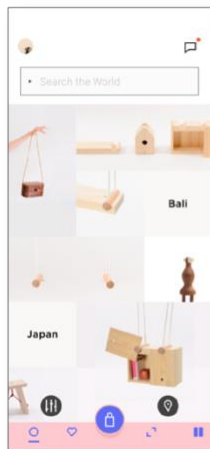


Main Page – Card Browse

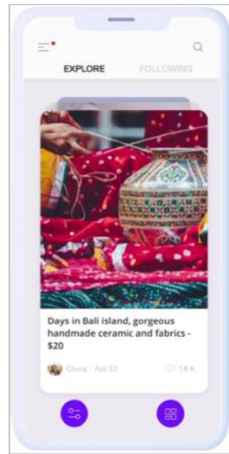


To ensure the authenticity, the exhibition of nice product photos is significant in this experience; card browse directly attract users instead of a list of products showing on one screen and need user's second thought of comparison. The menu was redesigned to hide all the features that are not so important into the hamburger bar on the top-left corner instead of putting everything up front because in this page, the primary goal LONE want customers to do is discovering products. For the main screen, each card was

created by a traveler with real images and a short caption. Users can easily swipe the card to see the next product recommended.



Original main screen

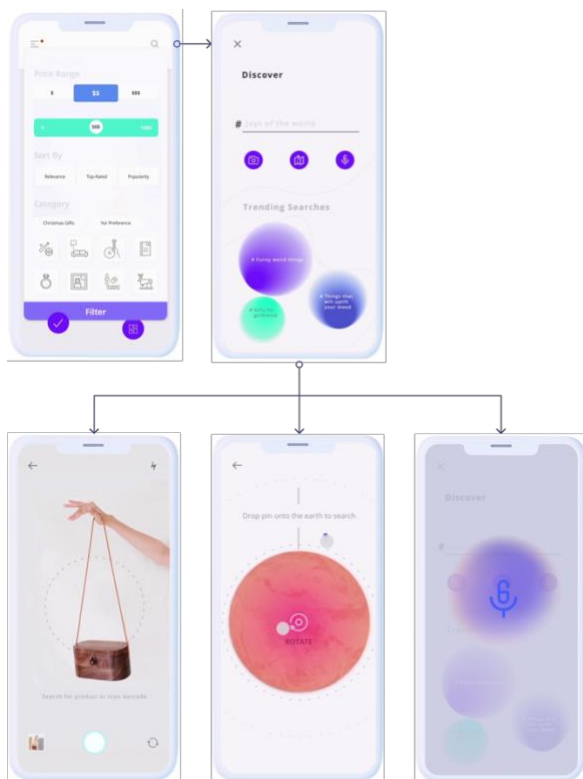


Final main screen



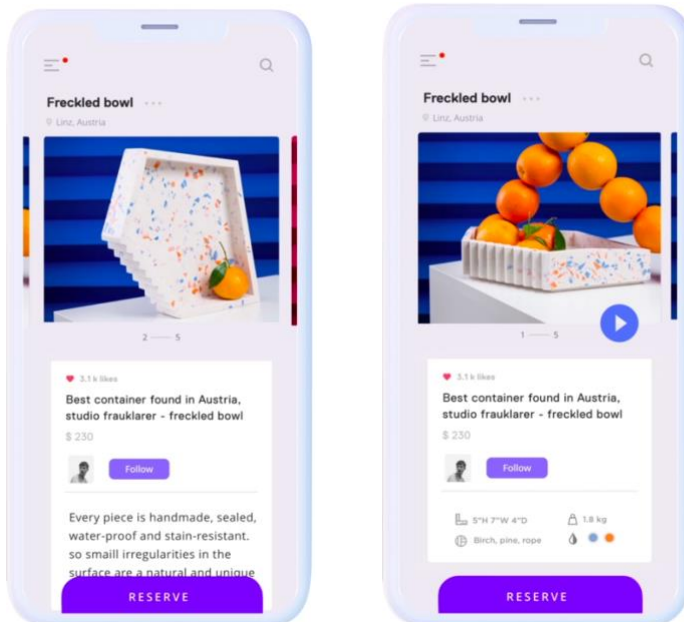
Discover Phase

Making discovery simple is an essential goal of our mobile application, LONE provides users with different search options: Search by Filter, Recommended trend, Keywords, Photo, Location, Voice Command.



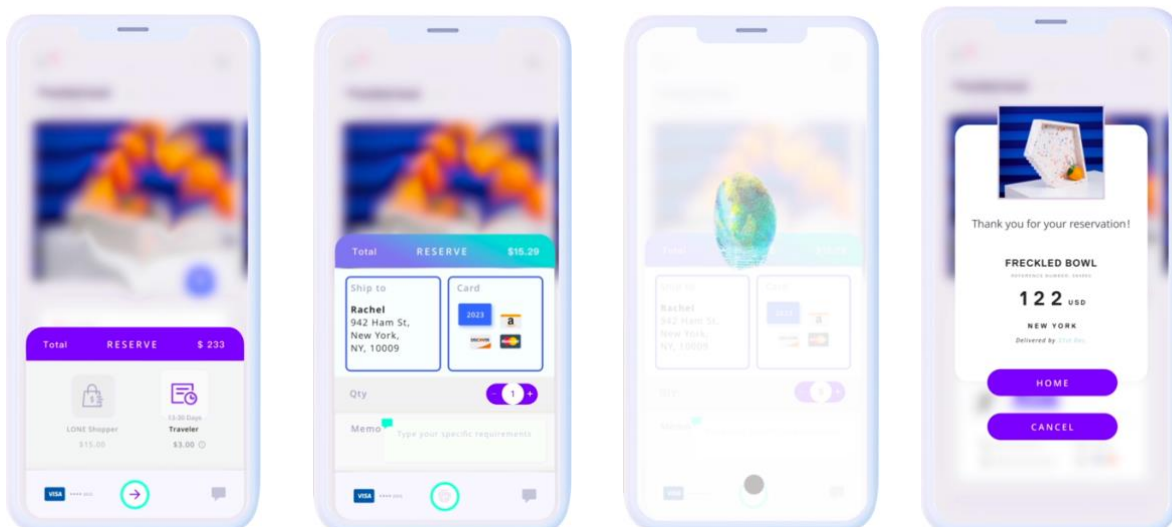
Product Details

The main content on product detail page is photos, short motion(optional), and short caption written by the traveler. Users can flip the text board to see more product details provided by a traveler.



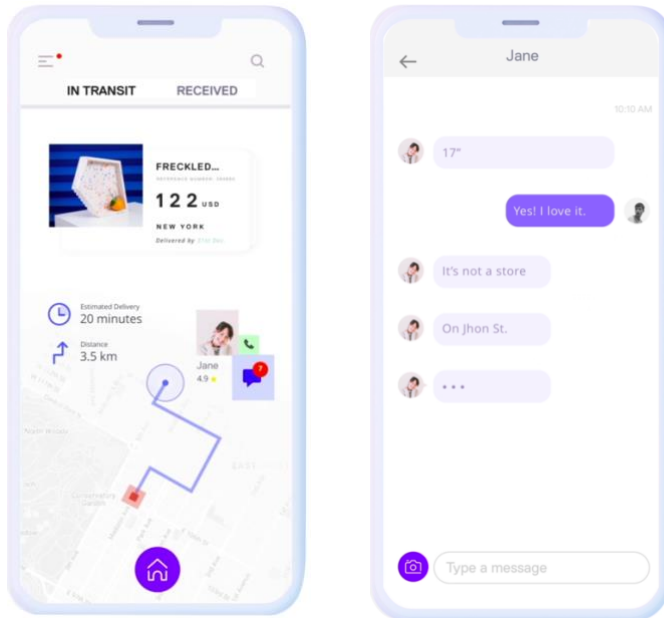
Reserve Product

Reserve product with simple steps. A transaction is safe and easy in LONE by using an unified API that supports bi-directional transactions. All payment go through this API layer and will be recorded using an append-only data model. This API system is also used by eBay and Airbnb transaction. (<https://medium.com/airbnb-engineering/scaling-airbnbs-payment-platform-43ebfc99b324>)



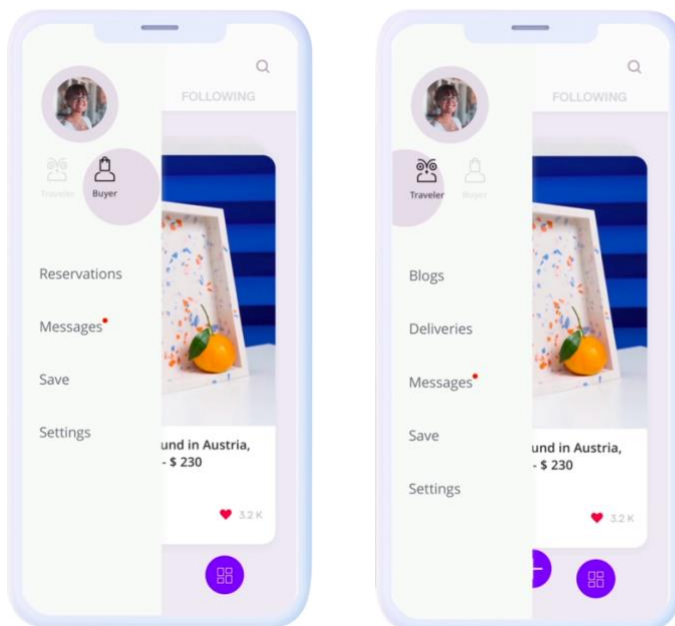
Track Status – Design for Trust

When the product arrives your city and out of delivery, the tracking system will be enabled to ensure the safe delivery of your authentic product. Your product will be delivered by LONE shoppers around your area, or other shipping company if there's no LONE shopper in your city yet. In the meantime, you can always communicate with LONE shoppers if you have the question.



Traveler and Buyer

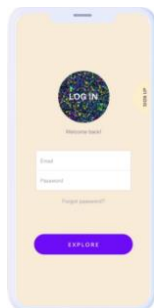
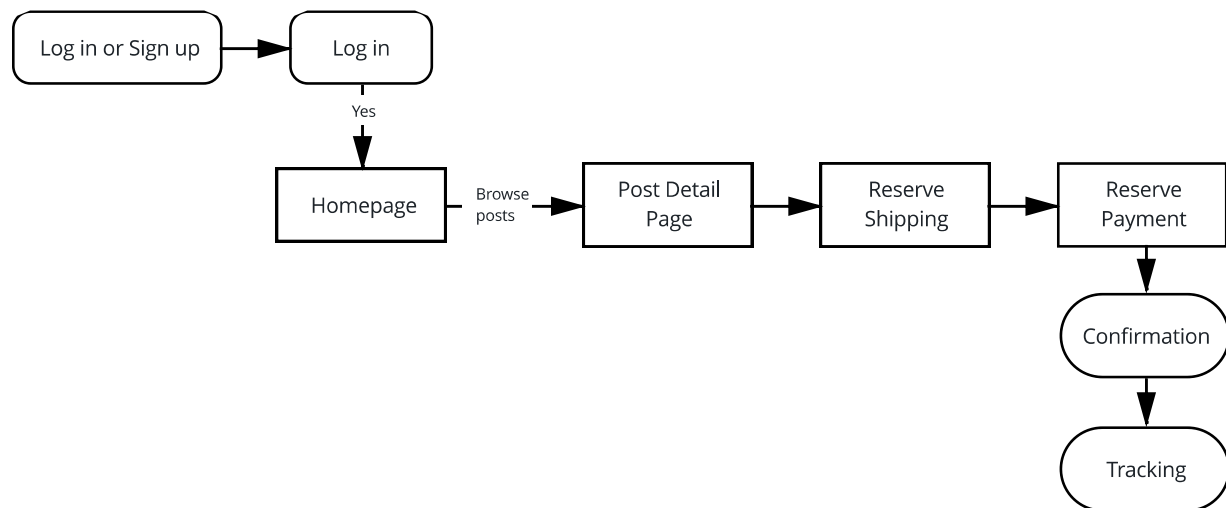
It is easy to change your role between buyer and traveler. When a user is out there traveling, one can be a traveler and share her finding of cool products. When a user wants to buy authentic things, one can browse and reserve product on LONE.



Use Case Scenarios

There are two use cases showcasing function of the application, with the UI sequence to support the use case.

The graph below is the use case of a customer user group. LONE customers log into the app, go to homepage, from the homepage, customers can browse posts and get into post detail page, then they can reserve the product, after chose shipping method, customers can pay for the item, then a confirmation page will come up. After the item is out of delivery in customer's city, customers can track the status.



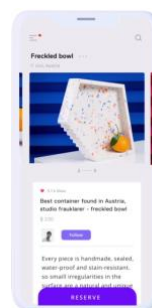
Log in or Sign up



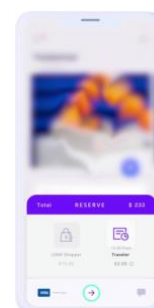
Log in



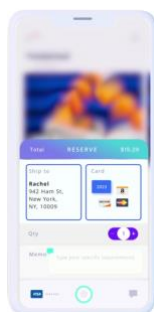
Homepage



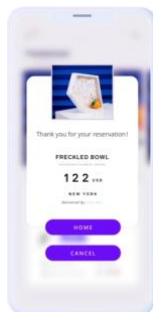
Product Detail



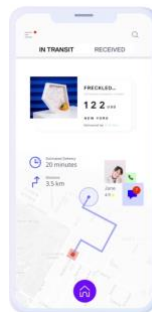
Reserve
- Shipping Method



Reserve
- Payment

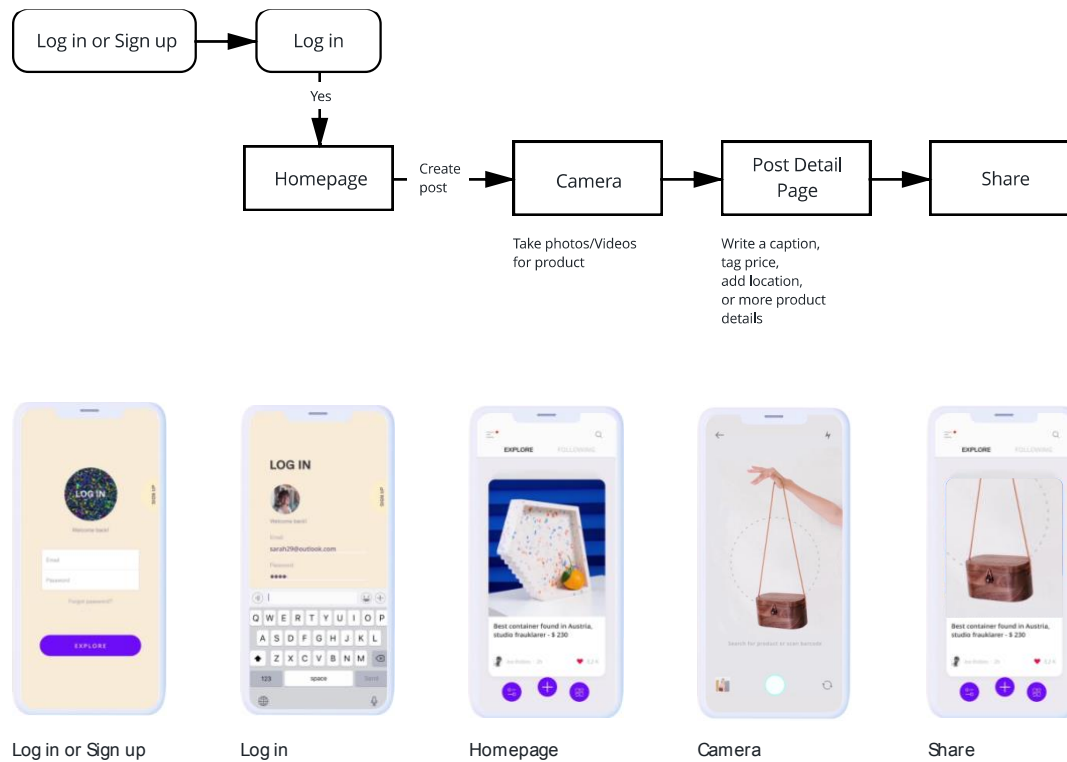


Confirmation

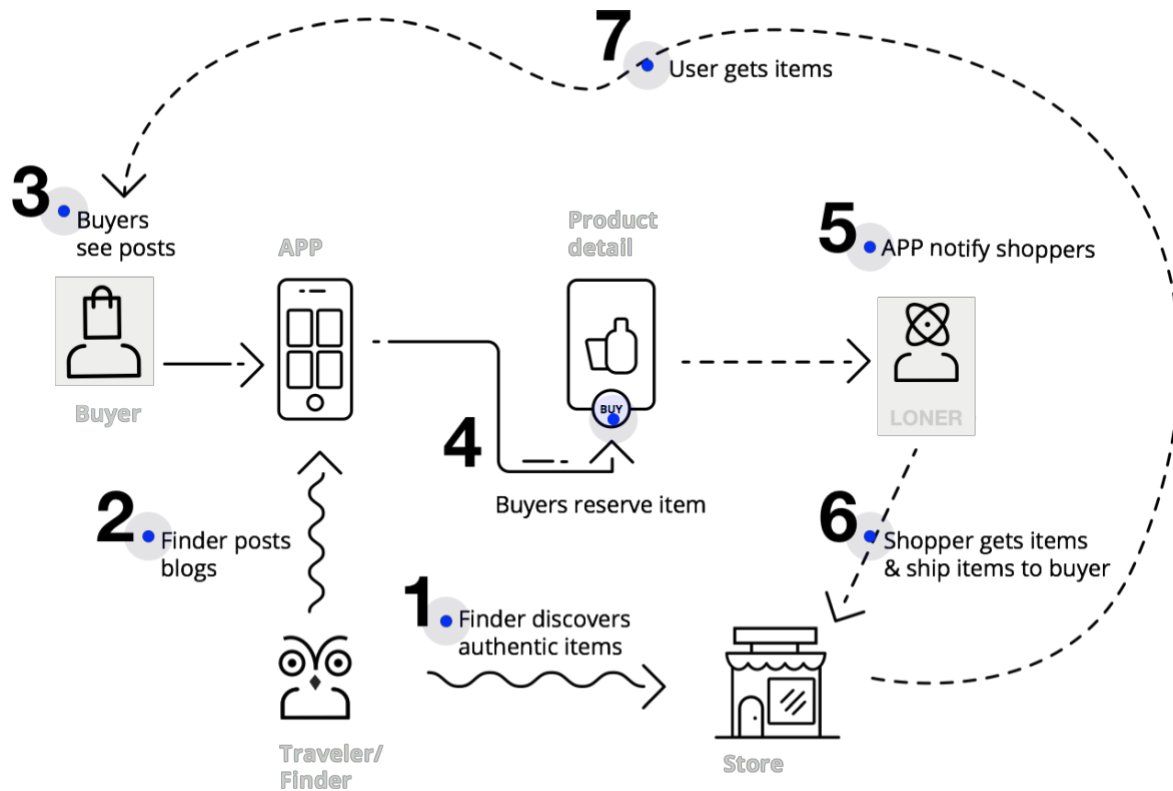


Tracking

The second graph is the traveler user group's use case. LONE traveler log into the mobile application, access to homepage, they click “add” button to enable camera tool, take photos or videos about the product, then go to post detail page to write a short caption, tag the price or other interesting caption onto the photos, add location, or more product details, then they can share their post.



Below is a macro user journey graph with a user's journey story.



Mary is in New York City; she wants to go shopping, she's looking for something different, she opens an application of places that making stuff that just isn't online, LONE. After sign in, Here Marry exposes to products from around the world, where did these products come from? They come from travelers like you and Marry, when you are out traveling, you see things and discover things, some of them you buy, some of them you don't, but you are interested in them, wouldn't it be great you could go back and possibly buy that/at later day or share that to somebody else.

So, the travelers are taking photos and adding it to a catalog. Now Marry has found something, a home décor joe posted 6 months ago, Mary is interested in it, Mary contracts out, she wants to buy it, we take care of the rest, we hire a local LONE shopper, we have a local network, based on a system like Uber, and they go out, pick it up and take it to the shipping, when the product arrives, the transaction is taking place just like with eBay. Throughout the time LONE shopper from Austria pick and ship the item for Mary, she can get more information about the product by engaging LONE shoppers, she can check the status of reservations and visually track the package on the date the package is out of delivery. It is easy to change your role between buyer and travel, you discover and share when you are out traveling, you browse, like and buy when you want to buy something.

5 Result

5-1 Basic Information and Implementation

Thesis Parameter

Output	Presentation motion and Animated UI prototype
Format	Full HD 1920x1080
Length	Presentation motion 385s Animated UI prototype 257s
Frame Rate	30fps
Compression	H.264

Tools and Software

Adobe After Effects
Adobe Illustrator
Adobe Photoshop
Sketch

Conclusions

LONE is introducing a revolutionized e-commerce, the future of shopping, helping people to buy authentic things from a small boutique or even on the street from another country, allowing people to discover joys of the world, serving for those who are curious about outside world, but can't always travel outside, enhance their understanding of what's good about other places with simple steps.

This thesis project is the biggest project I have ever worked on so far, plenty of revision and rethinking from concept, ideation, user experience, user journey, to user interface design and motion design. It was no doubt a valuable experience for my learning and thinking on design. During the process, I gained knowledge of social sharing e-commerce system. Throughout the research I got deeper thinking behind the problem statement is also the most important lesson for myself. For all those years learning and living as an international student, we are more sensitive, and it's easier to see some culture misunderstanding. From this project, I believe through sharing the discovery of good product such as traditional art, high-tech product, or an interesting designed product is not only solve the problem that make people conveniently shop over the world, but also broaden their vision of the world, allow people the access the awareness such as India has beautiful handcrafts, Japan has a high-tech cosmetic instrument or interesting product design, etc.

To make the logic clear of the use case was a challenge for my project, I learned that storytelling is important to explain your design and concept.

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